



Meeting Name	Date of Meeting
Microgrid Services Tariff (MST) Phase 2 Working Group (WG) Meeting #6	August 30, 2022

Agenda

Meeting Objective(s)	<ul style="list-style-type: none"> Understand how California is approaching microgrid compensation and funding through the Microgrid Incentive Program (MIP) and discuss takeaways that can be applied to Hawaii Evaluate the Calistoga Community Microgrid as a case study for a third-party operated Hybrid Microgrid and answer open questions Review and confirm topics and presentations for subsequent Working Group meetings
Review of Objectives & Ground Rules	<ul style="list-style-type: none"> No additional feedback received on WG objectives or drafted ground rules
Guest Speakers: Jessica Tse, Joyce Steingass, & Daniel Tutt, California Public Utilities Commission	<ul style="list-style-type: none"> See slides for full notes <p>PG&E’s Temporary Generation Program (TempGen): Launched in 2020 to address Public Safety Power Shutoff events to reduce wildfire risk, started with 350MW of diesel backup generation at 63 substations</p> <ul style="list-style-type: none"> As of 2022 no further temporary generation and CPUC now ordering PG&E to pursue a clean substation microgrid pilot (CSM Pilot) Technical concerns for inverter-based MG resources include worries about protection system; cold-load pick-up; power quality; logistics/deployment (for seasonality); issues in general for any large-scale MG but particularly for community scale <p>Microgrid Incentive Program (MIP): \$200M ratepayer-funded program to fund clean energy microgrids to support critical needs of disadvantaged and vulnerable communities impacted by grid outages</p> <ul style="list-style-type: none"> CPUC approved concept in 2021, full approval pending docket process with potential launch in mid-2023 \$200M based on high level estimate of \$15M cap per project which would fund roughly 15 projects; communities to apply through competitive solicitation process based on CPUC selection criteria, priority to low-income, rural, Tribal, and ESJ communities Overall slow process due to high complexity of community MG structures, CPUC chose to work directly with utilities (vs a third party) to administer program for time efficiency purposes Focus on community MGs (equates to “Hybrid MGs” in Hawaii context) because there are existing incentives for distributed energy resources (CPUC Self-Generation Incentive Program, or SGIP), MIP meant to serve policy gap to address longer duration and more complex multi-property MGs



	<p>Rules and Tariffs</p> <ul style="list-style-type: none"> • Behind-the-Meter Microgrid Tariff created to allow a single customer to establish a microgrid at a single account; overall disappointment from MG owners because there is no change in rates or compensation • Other Rule amendments completed to remove administrative barriers and align technical requirements • Overall Guiding Principles prioritized safety, consumer protection, and avoiding cost shifting when promoting MG development; still addressing open questions <ul style="list-style-type: none"> • Q: Did the \$15M project cap estimate include ongoing operations and maintenance costs? A: No, it did not. Meant to serve as a “back of the envelope” estimate only. • Q: Was there an uptick in MG development from the tariff work? A: The thought was that the rule changes would increase development, but developers seem to be in a holding pattern until the \$200M MIP launches • Q: What is the extent of customer MGs? How do you view protections and regulatory scheme for those? A: There are existing incentives and programs for customer MGs (i.e. SGIP) because they are, at its core, DER systems that can isolate from the grid • Q: How do you balance compensation and subsidization of non-participating customers? A: This gets more into the value of resiliency discussion that will be covered at the next meeting, but the focus should be on the safety of the grid and customers. Ideally, value of resiliency should be completed first before determining compensation and subsidization, but immediate needs from recent wildfire events had to be addressed as soon as possible. • Q: How has the value of resiliency been approached? A: Intersection of a planning approach; some form of a needs-based assessment needed to optimize where MGs can provide the most value; open questions around who and how will that be made.
<p>Third-Party Operated Hybrid Microgrid Case Study: Calistoga Community Microgrid</p>	<ul style="list-style-type: none"> • See slides for full notes • Overall motivation for Hybrid MG: resilience due to single 60kV line in a high fire threat area and long-duration outages (PSPS events last 24-96 hrs) <p>1st concept (proposed and rejected in 2019): Clean Coalition MG</p> <ul style="list-style-type: none"> • Scope: Covered 5 community sites (no residential coverage) • Design: Additional solar + storage to power selected 5 community sites • Ownership Model: Third party (Clean Coalition) • Revenue Model: PPA, ESA, or direct purchase; ROI based on annual electricity savings of \$346k/yr (estimated payback period 8/5-25 years per site) • Expenditures (lifecycle): Feasibility cost \$26k, conceptual estimated cost ~\$10M (70% of final costs)



	<ul style="list-style-type: none"> Funding: Existing federal and state tax incentives, DER bill credits, and bonds/loan guarantees; remaining funding from the City of Calistoga (concept rejected in 2019 due to high cost and low MG coverage) <p>2nd scope (completed 2020): PG&E TempGen</p> <ul style="list-style-type: none"> Scope: 7MW of load with diesel generators but did not cover western region of Calistoga which included residential and some commercial areas Design: Connected leased mobile diesel generators Ownership Model: PG&E leased temporary generators Revenue Model: N/A Expenditures (lifecycle): TBD Funding: ratepayer-based (operating expense only) Enabling Regulatory Mechanisms: PG&E TempGen Program <p>3rd scope (RFO released in 2021): PG&E RFO for CSM Pilot</p> <ul style="list-style-type: none"> Scope: 8.5MW throughout Substation Area for a 48-hr transmission outage Design: seeking a clean substation microgrid with third-party Distributed Generation Enabled Microgrid Services (DGEMS) Ownership Model: City of Calistoga collaborating with PG&E Revenue Model: Capacity Payment Rate (“CPR”) in \$/kW-month and Variable O&M Rate (“VOMR”) in \$/kWh Expenditures (lifecycle): TBD based on RFO Funding: ratepayer-based (capital & operating expenses) Enabling Regulatory Mechanisms: PG&E Clean Substation Microgrid Pilot
Review Work Plan	<ul style="list-style-type: none"> No additional comments on remaining workplan topics/guest speakers
Next Meetings	<ul style="list-style-type: none"> Next meeting date confirmed on Wednesday, September 28, 2022, time pending confirmation from guest speaker Remaining meetings to be on Wednesdays (October 19 & November 9)
Working Group Chairs:	
Christyn Senda, HE	Co-Chair christyn.senda@hawaiianelectric.com
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Attendees:	



Alan Lee, HE
Anand Samtani, Hawaii PUC
Andrew Nojiri, HE
Andrew Okabe, Hawaii PUC
Bryant Komo, HE
Daniel Tutt, CPUC
Eric Kunisaki, HE
Gerald Sumida, Carlsmith Ball (Ulupono)
Gina Yi, Hawaii PUC
Jessica Tse, CPUC
Joyce Steingass, CPUC
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Ken Aramaki, HE
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